August 16, 2009

Mr. Joshua Marx
Regulatory Project Manager
U.S. Army Corps of Engineers
Kansas City Regulatory Office
700 Federal Building
601 East 12th Street
Kansas City, MO 64106-2896

Dear Mr. Marx:

These comments are in response to your notice of July 10, 2009, concerning the BNSF Intermodal Facility (IMF) to be constructed on land near Gardner, Kansas and the induced development that will be created next to the IMF at the Allen Group Distribution Center Complex (DC).
http://www.nwk.usace.army.mil/regulatory/BNSF/BNSF_EA_Public_Notice.pdf

Permit No. 2006-1014
Issue Date: July 10, 2009
Expiration Date: July 31, 2009

The project under consideration is the BNSF Railway Company's (applicant's) proposal to construct an Intermodal Facility (IMF) near Gardner, KS, in Johnson County, Kansas. In this case, the Army Corps of Engineers (ACE) has chosen to conduct an Environmental Assessment (EA) rather than a more comprehensive Environmental Impact Statement (EIS). From our experience, we believe that the EA is inadequate in evaluating the potential traffic, emissions and health effects that will result from these new facilities. We respectfully request that the Corps move forward with an EIS that appropriately evaluates the potential health effects of this large project, which will – without question – have significant impacts on health and the environment.

By way of introduction, I submit these comments on behalf of the Community Outreach and Education Program (COEP) of the Southern California Environmental Health Sciences Center (SCEHSC). This Center is based at the Keck School of Medicine of the University of Southern California (USC) and is composed of scientific researchers from USC and UCLA, many of whom conduct exposure assessment, toxicological or epidemiological studies on the health impacts of air pollution. I direct the Center's outreach program, which is designed, in part, to ensure that the research findings of our Center investigators are understood by the public and considered in public policy decisions.

For more than ten years, USC investigators in our Center have been conducting the Children's Health Study, which examines the health effects of air pollution on the respiratory health of school children. The study's findings show that children who grow up breathing polluted air have reduced lung function when they reach adulthood (Gauderman et al., 2004) that air pollution is linked to increased school absences (Gilliland et al.), that children with asthma suffer other health problems (such as

bronchitis) when they are exposed to high levels of particulate matter (McConnell et al.), and that children who live near busy roads or freeways are more likely to have asthma (Gauderman et al., 2005; McConnell et al.). *[See list of citations in Appendix A]*

Other Center investigators have published papers on the impacts of exposure to particulate matter, including ultrafine particles (Fanning et al.). In addition, our researchers have published a paper on increased cardiovascular mortality related to $PM_{2.5}$ exposure in Southern California (Jerrett et al.). Others have published papers on reproductive effects among children of mothers living near busy roads and freeways (Wilhelm et al.).

This comment letter from our Center's Community Outreach and Education Program concerning the BNSF Gardner, Kansas Intermodal Facility is submitted with these scientific studies – and dozens of other air pollution health investigations – in mind. It is clear to us from reading the EA that significant air quality, as well as noise (Babisch et al.) and lighting (Chepesiuk) impacts will occur from this project, and that BNSF does not plan to mitigate all of the impacts. In addition, the potential for hazardous waste spills in transit and onsite does not seem to be adequately addressed (Horton et al.).

Our most serious concerns are summarized as follows:

1. The EA mistakenly concludes that regional pollution will decrease when the railyard is built, incorrectly implying that the Argentine Yard will close its classification facility when in fact the polluting Argentine classification operation might actually increase in size once the Argentine IMF closes.

2. The EA seriously underestimates the numbers of trucks and the levels of air pollutants that will be emitted from the facility, based on comparisons with other railyards in California, including BNSF yards.

3. The EA fails to summarize research findings showing health impacts from air pollution that are relevant to the assessment of health risks from the proposed railyard.

4. The EA fails to describe research findings showing health impacts in close proximity to mobile source pollution (such as the proposed IMF).

5. The EA minimizes the potential cancer-causing effects of exposure to diesel emissions, even though U.S. EPA regulatory documents describe diesel exhaust as "of serious public health concern."

6. The EA fails to consider the toxicity of ultrafine particles, a large component of diesel exhaust.

7. The EA fails to describe elevated cancer risks at other intermodal railyards, including at numerous BNSF railyards in California.

8. The EA fails to include mitigation measures that would reduce the emissions at the BNSF IMF, including those recommended by BNSF for its SCIG facility in Southern California and others adopted by BNSF for a Texas railyard.

9. The EA fails to include mitigation measures that were recommended by Kansas authorities, as evidenced by comment letters from KDHE and MARC.

10. The EA underestimates the potential impacts that air pollution from the intermodal facility will have on adults and children who want to use the adjacent park, hiking/biking/horseback/walking trails for exercise.

11. The ACE has created difficulties for the public in responding to the EA and to concerns about the proposed BNSF IMF.

Detailed comments follow.

1. **The EA mistakenly concludes that regional pollution will decrease when the railyard is built, incorrectly implying that the Argentine Yard will close its classification facility when in fact the polluting Argentine classification operation might actually increase in size once the Argentine IMF closes.**

The EA has several charts showing that regional pollution will decrease when the IMF opens, implying that the Argentine Yard will close. There is no evidence that the classification, fueling and rail operations (other than intermodal) will close at Argentine. BNSF Annual Reports and press releases make no statements that the railroad plans to close the Argentine facility. In fact, as recently as 2008 BNSF touted the Argentine Yard as its "largest classification facility in the U.S.[i] See volumes below from the BNSF 2008 Annual Report, page 7:

"BNSF Railway's largest freight car classification yards based on the average daily number of cars processed (excluding cars that do not change trains at the terminal, intermodal and coal cars) are shown below:

Classification Yards
Daily Average
Cars Processed

Argentine (Kansas City, Kansas) 1,772
Galesburg (Illinois) 1,603
Barstow (California) 1,292
Tulsa (Oklahoma) 1,206
Pasco (Washington) 1,142"

With additional train traffic capacity at the Gardner IMF, one might ask (but the EA fails to) whether the Argentine Yard will actually increase its classification capacity if the Gardener IMF opens. Classification yards are very polluting, as California experience testifies. A BNSF classification yard in Barstow, CA (smaller than Argentine) had the highest particle emissions of all 18 railyards studied in that state, with 27.9 tons of diesel particulate matter pollution per year. See chart[ii] below and note the pollution levels at the BNSF Barstow Yard – the first yard listed:

Table II-1: Comparison of Diesel PM Emissions (tons per year) from Four Major Source Categories within Eighteen Railyards.

Railyard	Locomotive	Cargo Handling Equipment	On-Road Trucks	Others (Off-Road Equipment, TRUs, Stationary Sources, etc.)	Total*
BNSF Barstow	27.1	0.03	0.04	0.75	27.9
BNSF San Bernardino	10.6	3.7	4.4	3.4	22.0
BNSF San Diego	1.6	N/A	0.007	0.04	1.7
UP ICTF/Dolores	9.8	4.4	7.5	2.0	23.7
UP Colton	16.3	N/A	0.2	0.05	16.5
UP Oakland	3.9	2.0	1.9	3.4	11.2
UP City of Industry	5.9	2.8	2.0	0.3	10.9
UP Roseville*	25.1	N/A	N/A	N/A	25.1
BNSF Hobart	5.9	4.2	10.1	3.7	23.9
UP Commerce	4.9	4.8	2.0	0.4	12.1
UP LATC	3.2	2.7	1.0	0.5	7.3
UP Stockton	6.5	N/A	0.2	0.2	6.9
UP Mira Loma	4.4	N/A	0.2	0.2	4.9
BNSF Richmond	3.3	0.3	0.5	0.6	4.7
BNSF Stockton	3.6	N/A	N/A	0.02	3.6
BNSF Commerce Eastern	0.6	0.4	1.1	1.0	3.1
BNSF Shella	2.2	N/A	N/A	0.4	2.7
BNSF Watson	1.9	N/A	<0.01	0.04	1.9

* The UP Roseville Health Risk Assessment (ARB, 2004a) was based on 1999-2000 emission estimate, only locomotive diesel PM emissions were reported in that study. The actual emissions were estimated at a range of 22.1 to 25.1 tons per year.
N/A = Not applicable.
+ Numbers do not add precisely due to rounding.

It is therefore critical to know if BNSF plans to increase the classification yard capacity at the Argentine Yard when it removes the IMF there. The following statement in the EA implies that the classification yard capacity will, indeed, increase: "Removal of the Argentine IMF would provide more space, tracks and switching facilities for the Argentine Yard." [See EA, page 3-22]. The EA must account for the increased pollution that will result from a larger classification facility at Argentine, keeping in mind that a much smaller classification yard (BNSF Barstow) has the highest pollution levels of any railyard in the State of California. I can find no data in the EA on the emission levels for the Argentine Yard's *classification operations* – nor of what they will be when the classification yard is enlarged. There is every reason to believe that the Argentine ClassificationYard currently has proportionally more pollution than the smaller BNSF Barstow Yard – that is, it may well already have significantly more than 30 tons of particulate pollution per year. If the Argentine Classification Yard is increased in size, the pollution levels will increase further. There is nothing in the EA stating that BNSF is planning any mitigation measures to reduce pollution for the Argentine Yard. The EA fails to address this issue in the discussion of regional pollution, making any claims that

regional pollution will decrease as a result of opening the BNSF IMF and closing the Argentine IMF completely unsubstantiated.

The EA cannot conclude that there will be a net reduction in regional emissions unless it is absolutely clear what will be occurring at the Argentine Yard once its IMF closes. If the Argentine Yard is going to increase its classification capacity, then clearly the net regional pollution from that action and the opening of the Gardner IMG will be an INCREASE IN REGIONAL POLLUTION. This issue must be addressed in an EIS.

In addition, there is nothing in the EA about either the proposed IMF or the Argentine Yard having a "load testing facility" or power-testing facility for all trains heading West. Load-testing and power-testing is known to produce high levels of pollution when the locomotive is tested at different notches. Where is this operation going to occur for westbound trains? Why is there no emission calculation for it? The EIS must examine this issue.

In conclusion, an EA cannot rely on false or untested assumptions to reach conclusions about regional pollution.

2. **The EA seriously underestimates air pollutants that will be emitted from the facility and the levels of truck activity and, based on comparisons with other railyards in California, including BNSF yards.**

Air pollutants/tons of particle emissions

The charts below show the number of lifts from the proposed Gardner IMF and the level of pollution anticipated:

Summary Table 2. Container lifts estimates for 2010 to forecast growth.

Site	2006	2010	Growth Factor
Gardner	371,529	413,000	1.112

Applying the growth factors to the 2006, estimates for the 2010 Gardner (build) scenario is shown in Summary Tables 4.

Summary Table 3. Gardner on-site 2010 emissions with growth.

Source	TOG	VOC	THC	CO	NOx	PM	SOx
Total on-site (tonnes)	15.03	14.75	14.25	179.23	108.22	5.16	2.30
Total on-site (tons)	16.57	16.26	15.71	197.56	119.29	5.69	2.54

The chart below from the EA (see Appendix B in the Technical Appendix A of the EA) shows the estimated levels of particulate emissions in tons from the proposed IMF in 2010, based on 2006 emissions. Below that chart is another chart of diesel particulate emissions estimated for California railyards, based on 2005 emissions. A comparison of the two charts for Particulate Matter emissions makes it immediately clear that the estimates of PM emissions for the Gardner IMF seem implausible and completely underestimated.

Gardner on-site 2010 emissions (metric tonnes) with growth (1.112 growth factor).

Source	VOC	CO	NOx	PM	SO2
Setout Line-Haul	2.28	3.09	22.58	0.71	0.27
Originating Line-Haul	1.58	1.90	12.30	0.42	0.13
Line-Haul used in Switching	0.10	0.13	1.13	0.03	0.01
Switching	0.90	3.26	19.08	0.42	1.77
Cargo handling equipment	6.44	121.83	40.75	3.20	0.00
Other nonroad equipment	1.41	34.48	1.35	0.03	0.01
On-road container trucks	0.93	5.24	9.59	0.27	0.02
Transport Refrigeration Units	0.03	0.17	0.48	0.03	0.09
Fleet Vehicles on-site	1.08	9.17	0.99	0.03	0.00
Total (tonnes)	**14.76**	**179.29**	**108.25**	**5.16**	**2.30**
Total (tons)	**16.27**	**197.62**	**119.33**	**5.68**	**2.54**

See the table below for estimated emissions at 18 railyards in California. Source: page 8 of the Health Risk Assessment for BNSF San Bernardino Railyard at http://www.arb.ca.gov/railyard/hra/bnsf_sb_final.pdf

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UP Oakland	3.9	2.0	1.9	3.4	11.2
UP City of Industry	5.9	2.8	2.8	0.3	10.9
UP Roseville*	25.1	N/A	N/A	N/A	25.1
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BNSF Richmond	3.3	0.3	0.5	0.6	4.7
BNSF Stockton	3.6	N/A	N/A	0.02	3.6
BNSF Commerce Eastern	0.6	0.4	1.1	1.0	3.1
BNSF Shella	2.2	N/A	N/A	0.4	2.7
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* The UP Roseville Health Risk Assessment (ARB, 2004a) was based on 1999-2000 emission estimate, only locomotive diesel PM emissions were reported in that study. The actual emissions were estimated at a range of 22.1 to 25.1 tons per year.
N/A = Not applicable.
* Numbers do not add precisely due to rounding.

Please note that the Gardner IMF PM emissions are estimated at six tons/year where the BNSF facility in San Bernardino, which has fewer "lifts" per year is estimated at 22 tons/year. In fact, only the smallest yards have emissions under 5 tons/year.

In the chart on the next page, please note that I have added a column for the number of "lifts" and compared the Gardner IMF to all intermodal facilities in CA. One can again quickly see that the Gardner IMF's estimated emissions simply are "out of range" when compared to similar intermodals in California. This situation is quite unlikely – since BNSF and Union Pacific have been working for more than a decade to bring lower-polluting engines and equipment into the California yards.

In the second chart, on the page after next, I have included four key intermodals in CA for comparison.

Comparison of tons of PM pollution from Gardner IMF (2010 build scenario) compared to estimated PM emissions in tons from all intermodals in CA (drawn from the HRAs by California Air Resources Board)

http://www.arb.ca.gov/railyard/hra/hra.htm

Intermodal Rail Facilities in CA compared to BNSF estimates of Gardner IMF 2005 Emissions	Primary type of yard from HRA data supplied to CARB	Lifts/year based on 2005 figures from HRA data supplied to CARB in draft mitigation plans	Loco-motive Emis-sions in Tons	Cargo Handling Equipment PM Emissions in Tons	On-Road Trucks PM Emissions in Tons *Gardner estimate is for "on site on-road trucks"*	Others (Off-Road Equipment, TRUs, Stationary Sources, etc.) PM	Total+ PM emissions in tons
BNSF San Bernardino	IMF	557,000	10.6	3.7	4.4	3.4	22.0
UP ICTF/Dolores	IMF	750,000	9.8	4.4	7.5	2.0	23.7
UP Oakland	IMF	250,000	3.9	2.0	1.9	3.4	11.2
UP City of Industry	IMF	201,000	5.9	2.8	2.0	0.3	10.9
BNSF Hobart	IMF	1,338,000	5.9	4.2	10.1	3.7	23.9
UP Commerce	IMF	345,000	4.9	4.8	2.0	0.4	12.1
UP LATC	IMF	193,000	3.2	2.7	1.0	0.5	7.3
BNSF Gardner IMF	IMF	2010 build scenario **413,000** Appendix B of Appendix A on Air Quality	1.58	3.20	.27	.09	5.69 tons
▼ COMPARISON OF GARDNER IMF FIGURES WITH OTHER INTERMODAL EMISSIONS ▼							
BNSF Gardner IMF as % of BNSF San Brdu		74%	15%	86%	6%	3%	26%

BNSF Gardner IMF as % of UP ICTF		55%	15%	73%	4%	5%	24%
BNSF Gardner IMF as % of UP Commerce		120%	32%	67%	14%	23%	47%
BNSF Gardner IMF as % of UP Oakland		165%	41%	160%	14%	3%	51%
BNSF Gardner IMF as % of UP City of Industry		205%	27%	114%	14%	30%	52%
BNSF Gardner IMF as % of BNSF Hobart		31%	27%	76%	3%	2%	24%
BNSF Gardner IMF as % of UP LATC		214%	49%	119%	27%	18%	78%

Intermodal Rail Facilities in CA compared to BNSF estimates of Gardner IMF 2005 Emissions	Primary type of yard from HRA data supplied to CARB	Lifts/year based on 2005 figures from HRA data supplied to CARB in draft mitigation plans	Loco-motive Emis-sions in Tons	Cargo Handling Equipment PM Emissions in Tons	On-Road Trucks PM Emissions in Tons *Gardner estimate is for "on site on-road trucks"*	Others (Off-Road Equipment, TRUs, Stationary Sources, etc.) PM	Total+ PM emissions in tons
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BNSF Hobart	IMF	1,338,000	5.9	4.2	10.1	3.7	23.9
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BNSF Gardner IMF as % of BNSF Hobart		31%	27%	76%	3%	2%	24%

Trucks: In 2030 there will be about 870,000 lifts a year at the proposed Gardner IMF.[iii] The estimate of 367 trucks per hour during PM peak hours in 2030 seems vastly understated, based on California intermodal experience. On the road leading into the intermodal facility in southern CA that has 120,000 fewer lifts per year (750,000 lifts a year in 2007 at the Union Pacific Intermodal Container Transfer Facility or UP ICTF), studies have regularly counted between 550-600 or more heavy duty diesel container trucks an hour during the PM peak hour.[iv] These truck trips are ones that go from the Ports directly to the intermodal facility and then leave, either as a bobtail or with a trailer (or vice-versa), so would be comparable to trucks going and coming from the IMF. See http://www.ictf-jpa.org/document_library/environmental_impact_report/ICTF%20NOP-IS.pdf

The EA states that there will be significant impacts in terms of "level of service" (LOS) on certain intersections and interchanges after the intermodal and logistics park are built but the EA concludes that KDOT is going to fix I-35 interchange and that the City of Gardner will fix other highways to accommodate the increased traffic load. The EA states that BSNF is talking to KDOT, MARC and the City of Gardner. These impacts need to be listed as significant impacts that are going to be require mitigation, but the mitigation measures cannot simply be "assumed." The cost to the public of altering roads, intersections, re-routing traffic, and rebuilding/enlarging interstate highways to accommodate the BNSF intermodal/distribution center traffic must be fully documented so that the public can determine if it wants to bear the cost of paying for such mitigation measures. Plus, agreement of KDOT and other agencies must be documented.

Another indicator that the predicted truck traffic from the intermodal and distribution center appear to be grossly underestimated is reports authored in KS showing that interstate highways will be dramatically congested in the future due to freight truck traffic in the state. For example:

a) There is mention in a document called the "5-County Study" about the need to build a new highway to connect the BNSF intermodal and I-70 and Leavenworth, but there is no discussion in the EA about this possibility. If KDOT is considering a connector road between the intermodal/logistics park and the I-70 to accommodate the intermodal facility, this must be included in the EA as a major impact of the Proposed Action. See: http://www.5countystudy.org/pdfs/meeting_notes_freight_040309.pdf.

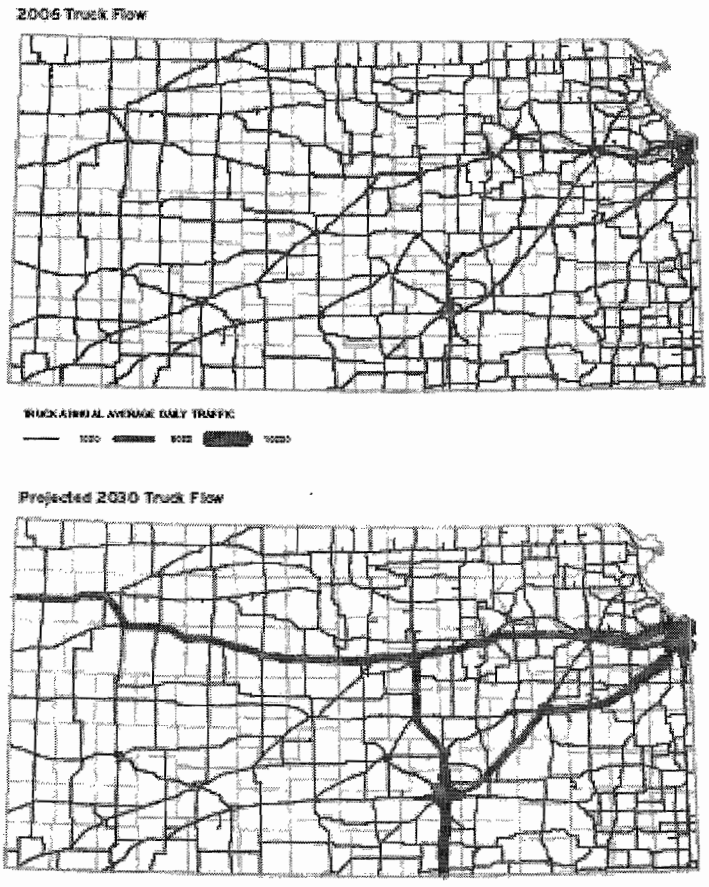
b) A power point presentation on the 5 County Study also discusses the impacts on travel of trucks on the highway in Johnson County and the need for I-35 capacity improvements. See: http://www.5countystudy.org/pdfs/WG_Present_Freight_Meeting_040309.pdf

c) A Kansas Statewide Freight Study says that "growth in truck traffic will impact the condition and performance of the highway system in Kansas," with the largest volumes on Interstates 35, 70, 335, and 135. That report states that US 56 through Gardner is expected to become an "urban highway bottleneck," as are other junctions along I-35. See: http://search.ksdot.org/query.html?qt=Kansas+Statewide+Freight+Study (Table 5.2 and http://www.ksdot.org:9080/burRail/Rail/pdf/Statewide%20Freight%20Plan,%20Sections%201-6.pdf. The economic costs of repairing the road system in Kansas after damage done by trucks from the intermodal facility need to be fully described.

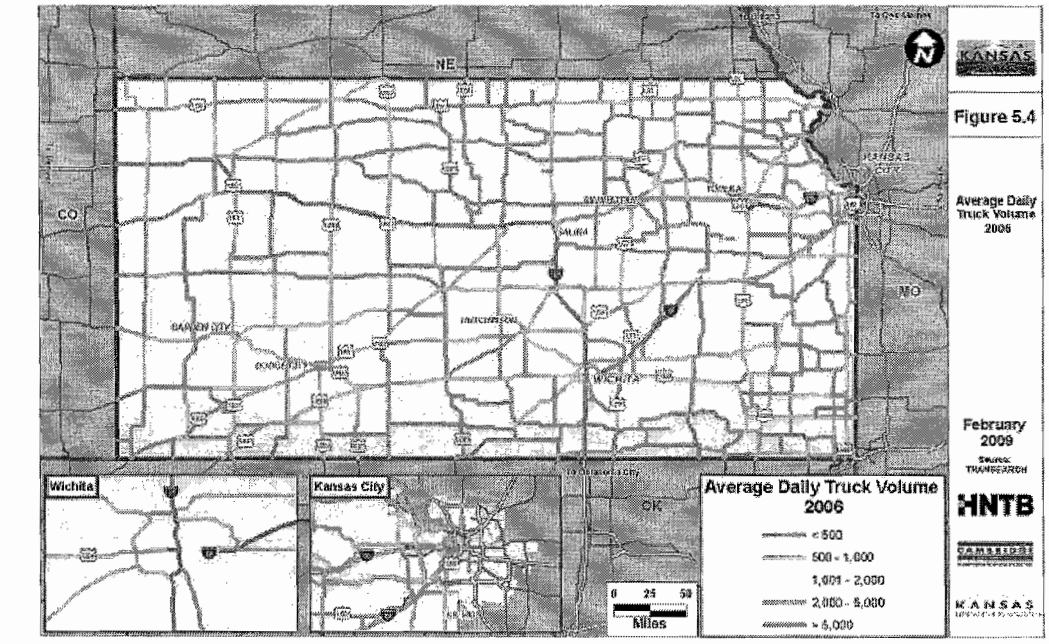
d) Page 5-1 of the Kansas Statewide Freight Study states that increasing freight traffic, population growth, and the increasing attractiveness of Kansas for intermodal developments and warehouse/distribution centers "will create additional truck and rail traffic that will lead to deterioration of road and bridge infrastructure, congestion and safety issues, and community livability concerns." The report also states that: "there were about 12 million interstate truck trips per year in Kansas in 2006 and it is predicted that there will be approximately 19.5 million in 2030." See: http://www.ksdot.org:9080/burRail/Rail/pdf/Statewide%20Freight%20Plan,%20Sections%201-6.pdf.

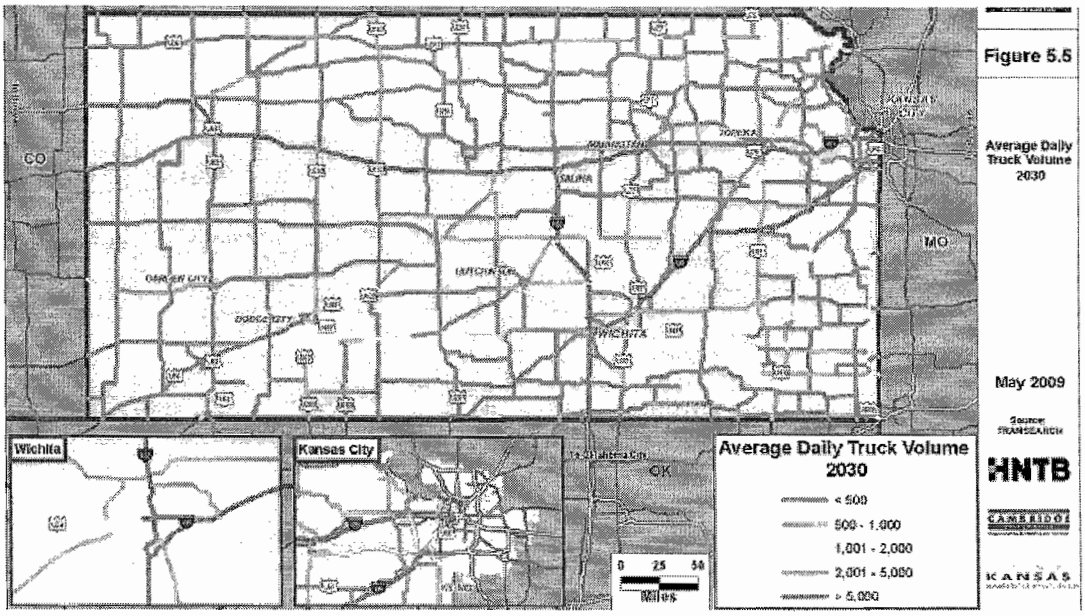
e) Dramatic increases in truck flows on the State of Kansas' highways are predicted as shown in the two maps below. The EA completely minimizes such congestion and truck flow issues – and by doing so, also minimizes the pollution that such truck flows will cause. The following two illustrative maps are from the Kansas Long Range Transportation Plan, Chapter 2, page 11.

Figure 2.2 - Kansas Truck Flows – 2006 and 2030



See also the following two maps highlighting the freight truck volumes anticipated in KS in the future (from the Kansas Statewide Freight Study, June 2009, on the KDOT website), to which the proposed IMF will be adding:





We request that the EA evaluate the amount of truck traffic overall in Kansas that will be added to interstate highways as a result of the proposed IMF – and the impacts these truck trips will create.

3. **The EA fails to summarize research findings showing health impacts from air pollution that are relevant to the assessment of health risks from the proposed railyard.**

Exposure to elevated particulate emission is linked to an increase in cardiovascular illness and increased mortality (Pope et al; Araujo et al; Delfino et al; Kan et al; Kunzli et al.). Diesel exhaust exposure is linked to inducing oxidative stress and inflammation, and inducing thrombus and ischemic effects (Hartz et al; Lucking et al; Mills et al. There are special concerns for diabetics with heart disease who are exposed to air pollution especially high particulate matter (Zanobetti et al.; Bateson et al.) In addition, exposure to elevated levels of diesel exhaust is linked to asthma and allergies (Barck et al; Chalupa et al.)

Studies show that air pollution is linked to lung cancer (Beelen et al.) and that railroad workers exposed to diesel exhaust are more likely to develop lung cancer than other non-exposed workers. (California Air Resources Board et al; Garshick et al.)

None of the extensive literature on the health effects of air pollution is summarized in the EA, another reason that an EIS must be conducted.

4. **The EA fails to describe research findings showing health impacts in close proximity to mobile source pollution (such as the proposed IMF).**

Many studies have measured elevated levels of pollutants emitted directly by motor vehicles near large roadways or other concentrated sources of traffic emissions (see for example, Wu et al; Zhu et al). These elevated concentrations are known to occur within approximately 300 meters of the road (see Health Effects Institute Report at http://pubs.healtheffects.org/view.php?id=306), although the distance may vary depending on traffic and environmental/meterologic conditions (see, Hu et al, which shows elevations of ultrafine particles more than one mile from a roadway during early morning hours in Santa Monica, CA). For another thorough review of near-roadway monitoring studies see Section 3.1.3 of EPA's Draft Regulatory Impact Analysis: Control of Hazardous Air Pollutants from Mobile Sources" (February 2006, http://www.epa.gov/oms/regs/toxics/ria-sections.htm

A large number of recent studies have examined the association between living near major roads and other sources of mobile air toxics and different adverse health endpoints. Several well-conducted epidemiologic studies have shown associations with cardiovascular effects, premature adult mortality, and adverse birth outcomes, including low birth weight and size (See Salam T, 2005); Wilhelm et al). Traffic-related pollutants

have been repeatedly associated with increased prevalence of asthma-related respiratory symptoms in children (California Air Resources Board; Gauderman, et al., 2005; Hu et al.; Jerrett et al.; Kozawa et al.; McConnell et al.; Oftedal et al.; Salam M, 2008; van Vliet et al.) and are linked to decreased lung function (Gauderman et al.). For a more detailed review of public health concerns near roadways, see Section 3.5 of EPA's Draft Regulatory Impact Analysis: Control of Hazardous Air Pollutants from Mobile Sources" (February 2006, http://www.epa.gov/oms/regs/toxics/ria-sections.htm).

5. **The EA minimizes the potential cancer-causing effects of exposure to diesel emissions, even though U.S. EPA regulatory documents describes diesel as "of serious public health concern."**

Although the ACE EA attempts to minimize the impacts of diesel exhaust emissions by stating that US EPA does not have a potency factor for diesel, the Corps fails to describe the significant scientific literature on diesel exhaust's carcinogenicity (see California Air Resources Board; Garschick et al.). The following statements are taken *directly* from the U.S. EPA Locomotive and Marine Engine Rule and thus are a relatively current regulatory view of U.S. EPA on the health effects of diesel exhaust. The EIS must use current U.S. EPA regulatory language in its description of the health effects anticipated from diesel exhaust.

U.S. EPA, in the first italicized section below states very clearly that: "*Diesel exhaust is of special public health concern, and since 2002 EPA has classified exposure to diesel exhaust as likely to be carcinogenic to humans by inhalation from environmental exposures. Recent studies are showing that populations living near large diesel emission sources such as major roadways, rail yards, and marine ports are likely to experience greater diesel exhaust exposure levels than the overall U.S. population, putting them at greater health risks.*" And yet, the EA concludes that there will not be increased exposure for residents as a result of the Gardener IMF.

It also states very clearly that meta-analyses by U.S. EPA show: "*the positive relationship between diesel exhaust exposure and lung cancer.*"

The following shaded section in quotations and italics is taken verbatim from the U.S. EPA Locomotive Rule: "*Control of Emissions of Air Pollution From Locomotive Engines and Marine Compression-Ignition Engines Less Than 30 Liters per Cylinder.*"

Federal Register: May 6, 2008 (Volume 73, Number 88), Rules and Regulations, Page 25097-25146, From the Federal Register Online via GPO Access. *http://www.epa.gov/fedrgstr/EPA-AIR/2008/May/Day-06/a7999a.htm*

"*... Diesel exhaust is of special public health concern, and since 2002 EPA has classified exposure to diesel exhaust as likely to be carcinogenic to humans by inhalation from environmentalexposures.\4\ Recent studies are showing that populations living near large diesel emission sources such as major roadways, rail yards, and marine ports are*

likely to experience greater diesel exhaust exposure levels than the overall U.S. population, putting them at greater health risks.\5 6

\4\ U.S. EPA (2002) Health Assessment Document for Diesel Engine Exhaust. EPA/600/8-90/057F. Office of Research and Development, Washington DC. This document is available electronically at http://cfpub.epa.gov/ncea/cfm/recordisplay.cfm?deid=29060.

\5\ Kinnee, E.J.; Touman, J.S.; Mason, R.; Thurman, J.; Beidler, A.; Bailey, C.; Cook, R. (2004) Allocation of onroad mobile emissions to road segments for air toxics modeling in an urban area. Transport. Res. Part D 9: 139-150.

\6\ State of California Air Resources Board. Roseville Rail Yard Study. Stationary Source Division, October 14, 2004. This document is available electronically at: http://www.arb.ca.gov/diesel/documents/rrstudy.htm and State of California Air Resources Board. Diesel Particulate Matter Exposure Assessment Study for the Ports of Los Angeles and Long Beach, April 2006. This document is available electronically at: http://www.arb.ca.gov/regact/marine2005/portstudy0406.pdf.

Locomotive and marine diesel engines emit diesel exhaust (DE), a complex mixture comprised of carbon dioxide, oxygen, nitrogen, water vapor, carbon monoxide, nitrogen compounds, sulfur compounds and numerous low-molecular-weight hydrocarbons. A number of these gaseous hydrocarbon components are individually known to be toxic, including aldehydes, benzene and 1,3-butadiene. The diesel particulate matter (DPM) present in diesel exhaust consists of fine particles (< 2.5 microns), including a subgroup with a large number of ultrafine particles (< 0.1microns). These particles have a large surface area which makes them an excellent medium for adsorbing organics and their small size makes them highly respirable and able to reach the deep lung. Many of the organic compounds present on the particles and in the gases are individually known to have mutagenic and carcinogenic properties. Diesel exhaust varies significantly in chemical composition and particle sizes between different engine types (heavy-duty, light-duty), engine operating conditions (idle, accelerate, decelerate), and fuel formulations (high/low sulfur fuel). Also, there are emissions differences between on-road and nonroad engines because the nonroad engines are generally of older technology. This is especially true for locomotive and marine diesel engines.\46\"

\46\ U.S. EPA (2002) Health Assessment Document for Diesel Engine Exhaust. EPA/600/8-90/057F Office of Research and Development, Washington DC. Pp1-1 1-2. This document is available electronically at http://cfpub.epa.gov/ncea/cfm/recordisplay.cfm?deid=29060. This document can be found in Docket EPA-HQ-OAR-2003-0190.

"For the Diesel HAD, EPA reviewed 22 epidemiologic studies on the subject of the carcinogenicity of workers exposed to diesel exhaust in various occupations, finding increased lung cancer risk, although not always statistically significant, in 8 out of 10 cohort studies and 10 out of 12 case-control studies within several industries, including railroad workers. Relative risk for lung cancer associated with exposure ranged from 1.2 to 1.5, although a few studies show relative risks as high as 2.6. Additionally, the Diesel HAD also relied on two independent meta-analyses, which examined 23 and 30 occupational studies respectively, which found statistically significant increases in smoking-adjusted relative lung cancer risk associated with exposure to diesel exhaust, of 1.33 to 1.47. These meta-analyses demonstrate the effect of pooling many studies and in this case show the positive relationship between diesel exhaust exposure and lung cancer."

"„„„ These studies take into account all air pollution sources, including both spark-ignition (gasoline) and diesel powered vehicles, and indicate that exposure to $PM_{2.5}$ emissions near roadways, which are dominated by mobile sources, are associated with potentially serious health effects. For instance, a recent study found associations between concentrations of cardiac risk factors in the blood of healthy young police officers and $PM_{2.5}$ concentrations measured in vehicles.[26] Also, a number of studies have shown associations between residential or school outdoor concentrations of some fine particle constituents that are found in motor vehicle exhaust, and adverse respiratory outcomes, including asthma prevalence in children who live near major roadways.27 28 29"

\26\ Riediker, M.; Cascio, W.E.; Griggs, T.R.; et al. (2004) Particulate matter exposure in cars is associated with cardiovascular effects in healthy young men. Am J Respir Crit Care Med 169: 934-940.

\27\ Van Vliet, P.; Knape, M.; de Hartog, J.; Janssen, N.; Harssema, H.; Brunekreef, B. (1997). Motor vehicle exhaust and chronic respiratory symptoms in children living near freeways. Env.Research 74: 122-132.

\28\ Brunekreef, B., Janssen, N.A.H.; de Hartog, J.; Harssema,H.; Knape, M.; van Vliet, P. (1997). Air pollution from truck traffic and lung function in children living near roadways. Epidemiology 8:298-303.

\29\ Kim, J.J.; Smorodinsky, S.; Lipsett, M.; Singer, B.C.; Hodgson, A.T.; Ostro, B. (2004). Traffic-related air pollution near busy roads: The East Bay children's respiratory health study. Am. J. Respir. Crit. Care Med. 170: 520-526.

Recent new studies from the State of California provide evidence that $PM_{2.5}$ emissions within marine ports and rail yards can contribute significantly to elevated ambient concentrations near these sources. 30 31

\30\ State of California Air Resources Board. Roseville Rail

Yard Study. Stationary Source Division, October 14, 2004. This document is available in Docket EPA-HQ-OAR-2003-0190. This document is available electronically at: http://www.arb.ca.gov/diesel/documents/rrstudy.htm.

\31\ State of California Air Resources Board. Diesel Particulate Matter Exposure Assessment Study for the Ports of Los Angeles and Long Beach, April 2006. This document is available in Docket EPA-HQ-OAR-2003-0190. This document is available electronically at: ftp://ftp.arb.ca.gov/carbis/msprog/offroad/marinevess/documents/portstudy0406.pdf.

6. **The EA** fails to consider the toxicity of ultrafine particles, a large component of diesel exhaust (Araujo et al.; Chalupa et al.; Delfino et al.; Fanning et al.; Zhu et al.). The regulatory language quoted above from the U.S. EPA locomotive rule discusses the concerns about ultrafine particles: "*The diesel particulate matter (DPM) present in diesel exhaust consists of fine particles (< 2.5 microns), including a subgroup with a large number of ultrafine particles (< 0.1microns). These particles have a large surface area which makes them an excellent medium for adsorbing organics and their small size makes them highly respirable and able to reach the deep lung. Many of the organic compounds present on the particles and in the gases are individually known to have mutagenic and carcinogenic properties.*"

Information on the toxicity of ultrafine particles must be included in the EIS.

7. **The EA fails to describe elevated cancer risks at other railyards, including at numerous BNSF railyards in California. The EIS must look at diesel cancer risks, and a Health Risk Assessment should also be conducted.**

The California Air Resources Board has conducted Health Risk Assessments on 18 railyards in California. The agency calculated elevated risks at many yards, with particularly elevated risks calculated at a classification yard in Roseville and four intermodal facilities in southern California (both UP and BNSF). The most elevated cancer risk calculated by the ARB at any railyard in the state was at the BNSF intermodal facility in San Bernardino.

Here is the link to all the HRAs. http://www.arb.ca.gov/railyard/hra/hra.htm. The HRAs have all been submitted as hard copies by Melissa Lin-Perrella, staff attorney with the Natural Resources Defense Council. At the ARB site, the Corps can find presentations by ARB, UP and BNSF and the railroad's proposed mitigation plans to reduce the cancer risks at these 18 yards.

Here is a press release from ARB chair Mary Nichols issued when several HRAs were released in 2008: http://www.arb.ca.gov/newsrel/nr031108.htm. In the release ARB Chair Nichols states: "Air quality around rail yards is in dire need of improvement." The press release states that the "At the ITCF/Dolores UP railyard, the cancer risk at or near the railyard is estimated to be about 1,200 chances per million based on a 70-year exposure duration." [Ten in one million excess risk over background is typically considered in the allowable/acceptable range.]

The UP intermodal in Wilmington, CA, near West Long Beach has fewer lifts (750,000) than the one in Gardiner would have at full build out. Another report reviews monitoring studies, including a study of the elevated levels of diesel exhaust (as measured by elemental carbon) in the close vicinity of the UP ICTF.
http://www.ictf-jpa.org/document_library/technical_studies/USC%20Traffic%20and%20Exposure%20Assessment%20near%20ICTF.pdf

All of the HRAs show elevated levels of cancer risk from the largest intermodal facilities extending more than one mile from the intermodals. There is no reason to believe that the Gardner IMF would have lower emissions that CA railyards (which, in fact, have MORE mitigation measures than will be utilized at Gardner). Since the wind at the Gardner IMF proposed location apparently blows toward the town of Gardner, including toward a subdivision and two schools within a mile of the proposed IMF, there is every reason to believe that there will be elevated cancer risks as a result of the Gardner IMG.

To answer these questions, the Corps needs to conduct an EIS, with a full Health Risk Assessment.

In addition, we would like to point out that the cancer risks from diesel exhaust have been well-documented in California, including at BNSF railyards, with the results widely publicized. References to the HRAs themselves can be found elsewhere in these comments. But we also include press stories about diesel cancer health risks and community concerns around railyards in California, for the Army Corps of Engineers' record on the proposed BNSF Gardner IMF. Please see Appendix B for the newstories.

8. **The EA fails to include mitigation measures that would reduce the emissions at the BNSF IMF, including those recommended by BNSF for its proposed Southern California International Gateway (SCIG) facility in Southern California and others adopted by BNSF for a Texas railyard.**

BNSF is promising the following for its railyard in Wilmington, CA to make it "green:"

1) all electric cranes *(note that the Gardner IMF will have some electric cranes but will also have diesel rubber-tired gantry cranes)*
2) LNG-fueled or equivalent hostling trucks, tractors and other rail yard equipment *(no mention of alternative fuels in the EA)*
3) only clean trucks will serve the facility, using designated non-residential routes that BNSF monitors for compliance. A recent enhancement promised by BNSF: 100% of the truck fleet servicing SCIG will be model year 2007 or newer. *(There is no such promise in the Gardner IMF EA).*

4) Low emission switch engines. *(BNSF has placed 67 GenSet switch locomotives in service for the Dallas/Fort Worth and Houston areas; no mention of GenSets or "low emission switch engines" is found in the EA or in the Technical Air Quality Appendix).*

References to the enhancements promised by BNSF at its proposed SCIG facility can be found at the following locations:
http://www.greencarcongress.com/2007/05/bnsf_railway_co.html

http://www.joc-digital.com/joc-online/20070514/?pg=40

http://www.fasterfreightcleanerair.com/pdfs/Presentations/FFCACA2008/Matt%20Rose_BNSF.pdf

Reference to ultra-low emission switch engines used by BNSF in Texas can be found at :
http://www.bnsf.com/media/news/articles/2008/05/2008-05-21a.html

9. The EA fails to include mitigation measures that were recommended by Kansas authorities, as evidenced by comment letters from KDHE and MARC.

Many of the KDHE requested mitigations are not included in the EA as mitigation measures, and it is unclear why they were not adopted. For example, clean fuels, retrofits on trucks, etc., are not part of the EA. All of the following mitigation measures must be considered in the EIS.

- Installing automatic idle reduction devices on diesel vehicles, including locomotives and switch engines;
- Mandatory idle reducing requirements, training and education for users of the intermodal facility and ancillary developments, particularly heavy-duty diesel trucks;
- Emission reduction retrofits on diesel vehicles and equipment including locomotives, heavy-duty diesel trucks and hostler trucks;
- Use of diesel and gasoline powered equipment and vehicles that meet the most stringent state or federal emission standards, and additional engine upgrades, particularly for locomotives; in advance of federal requirements;
- Use of vehicles and equipment that run on alternative fuels such as ethanol or electricity (both gasoline/electric and diesel/electric hybrid vehicles are now available);
- Use of energy efficient vehicles, equipment and building;
- Provision of alternative fuels refueling at the intermodal facility and logistics park,
- Using highway diesel for locomotives based in the KC metro area;
- Development and implementation of a site-wide ozone reduction plan that incorporates, among other things, actions to be taken whenever an Ozone Alert! day is forecast.

Similarly, MARC suggested mitigations that have not been included in the EA.

- Idle reduction equipment on locomotives and switch engines;
- Idle reduction policies for trucks using the intermodal facility;
- Emission reduction retrofits for locomotives and trucks operating in the facility;
- Energy efficiency requirements for all buildings that are part of the intermodal facility and logistics park;
- Native landscaping to reduce the need for mowing with gasoline-powered equipment;
- The development of an Ozone Action Plan for the facility, including actions to be taken on Ozone Alert days.

10. The EA underestimates the potential impacts that air pollution from the intermodal facility will have on adults and children who want to use the adjacent park, hiking/biking/horseback/walking trails for exercise.

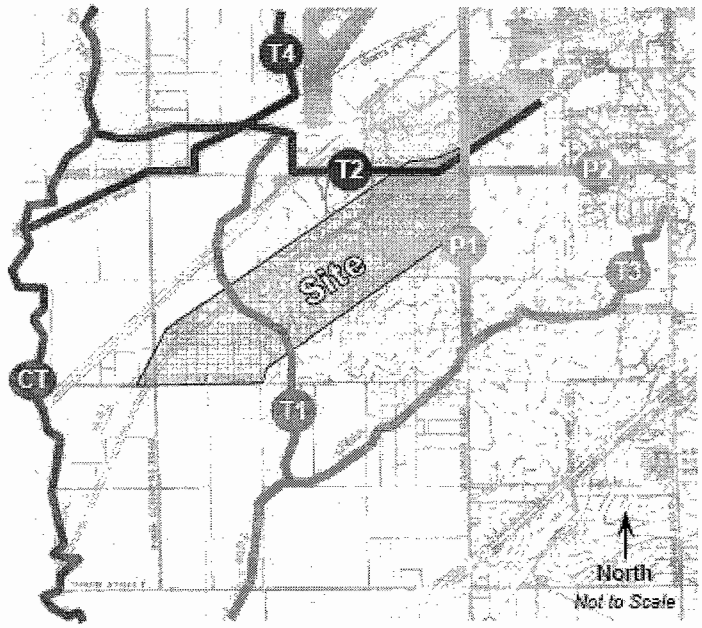
At a time when exercise in America is almost a national imperative to reduce obesity and related health impacts, it is of great public health concern that a major railroad company would select land in proximity to several recreational parks (Mildale Farm and Big Bull Creek Park) in the Johnson County, KS area to site an intermodal facility. Research shows that children breathe more deeply and heavily – getting higher doses of any pollution in the air around them – when they exercise. Thus, siting an intermodal facility (when every intermodal facility studied in California has been shown to be heavily polluting, including BNSF facilities) in close vicinity to a park designed for active recreation is of great public health concern.

The EA underestimates the potential impacts that air pollution from the intermodal facility will have on adults and children who want to use the adjacent park, hiking/biking/horseback/walking trails for exercise.

The EA says that the City of Gardner would have to make major changes to proposed trails and pathways to accommodate the proposed IMF project and modify pedestrian and bike paths, as described below:

> The City of Gardner plans to update its Trails and Pathways Plan as well as its Transportation Master Plan this year (2008). Based on communications with City staff, it is expected that major changes will be made to the proposed trails and pathways in the vicinity of the Proposed Action, and modified or additional pedestrian or bicycle facilities (such as bike lanes or routes) may be developed.

Figure 3-15:
Potential Future Trails



From extensive tours of cities in CA with intermodal facilities, and discussions with residents living around intermodal facilities, any thought of bicycling or hiking in close proximity to the intermodal rail yards is beyond their (and my) comprehension because of the elevated levels of near-source pollution.

The impacts on recreational facilities and the health effects of active recreation next to a polluting intermodal facility in Johnson County must be more seriously addressed in an EIS.

11. The ACE has created difficulties for the public in responding to the EA and to concerns about the proposed BNSF IMF.

a) The Army Corps of Engineers has not been responsive to a request for a public hearing at which experts and local residents could speak about their concerns. I personally requested a public hearing about the EA on July 31, 2009, but did not receive a response. See below in yellow shading:

From: Andrea Hricko [mailto:ahricko@usc.edu]
Sent: Friday, July 31, 2009 5:44 PM
To: 'Joshua.A.Marx@usace.army.mil'
Subject: Request for public hearing

Dear Mr. Marx: I would like to formally request a public hearing on the Army Corps of Engineers EA for the BNSF intermodal yard near Gardner, KS. I have reviewed the EA and believe that

there are many unanswered questions that a public hearing would help answer. Thank you for your consideration. Sincerely yours, Andrea Hricko, USC

b) There are numerous documents mentioned in the EA that were not available for public viewing on the ACE website. This made it difficult for experts to review the back-up documents. I request that all documents upon which the Army Corps relied for the EA be posted to the website.
c) The Corps gave an extremely limited period of time for comments on the Draft EA, and when requests were made for additional time, only one week was added to the comment period.
d) It is unclear what role BNSF had in creating the technical appendices that accompany the Draft EA. The BNSF logo is on several of the documents. In at least one situation (Port of Los Angeles), a consulting firm signing a contract with the Port for creation of an EIR/EIS is not allowed to share the work product with the proponent. This raises a question about whether the Army Corps of Engineers has a policy to ensure that documents prepared as part of an EA or EIS are independent reviews.

ENDNOTES

[i] BNSF Annual Report, 2008, http://www.bnsf.com/investors/annualreports/2008annrpt.pdf .
[ii] Chart from Health Risk Assessment of BNSF San Bernardino Facility, accessed on August 14, 2009 at the following URL: http://www.arb.ca.gov/railyard/hra/bnsf_sb_final.pdf; page 8.
iii Appendix A, Traffic Technical Report, page 51.
[iv] Houston D, Krudysz M, and Winer AM. Diesel Truck Traffic in Port-Adjacent Low-Income and Minority Communities; Environmental Justice Implications of Near-Roadway Land Use Conflicts. The Transportation Research Board 87th Annual Meeting, January, 2008.
[v]Appendix A, Traffic Technical Report, page 51:

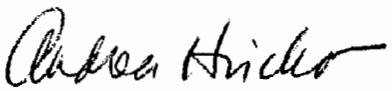
Table 3-13: 2030 Gardner IMF Operations Trip Generation

		AM Peak Hour			PM Peak Hour		
	Daily	in	out	tota l	in	out	tota l
Trucks	3,121	68	103	171	120	94	214
Bobtails	2,233	49	73	122	86	67	153
Non-Trucks	691	135	135	270	7	14	21
Total	6,045	252	311	563	213	175	388

[vi] See, e.g., South Coast Air Quality Management District. Rule 1158, Follow-up Study #12. Sampling Conducted during November 12, 2005 – February 1, 2006 and December 1, 2006 – March 1, 2007.

Thank you for consideration of these comments. The attached Appendices include References to Research Findings cited in the text of my comments and relevant News Stories about diesel cancer risks at other railyards; these are to be considered an integral part of comments.

Sincerely yours,



Andrea M. Hricko
Associate Professor of Preventive Medicine
Keck School of Medicine
University of Southern California &
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Southern CA Env Health Sciences Ctr
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Los Angeles, CA 90033

Appendix A

List of Health Impact Studies Referenced in Text

Hard copies of all the articles referenced below were submitted to the Army Corps of Engineers by FEDEX and received in Kansas City, MO on August 13, 2009 (See FEDEX confirmation attached)

Araujo, J. A., B. Barajas, et al. (2008). "Ambient particulate pollutants in the ultrafine range promote early atherosclerosis and systemic oxidative stress." Circ Res 102(5): 589-596.

Babisch, W., B. Beule, et al. (2005). "Traffic noise and risk of myocardial infarction." Epidemiology 16(1): 33-40.

Barck, C., J. Lundahl, et al. (2005). "Brief exposures to NO2 augment the allergic inflammation in asthmatics." Environ Res 97(1): 58-66.

Bateson, T. F. and J. Schwartz (2008). "Children's response to air pollutants." J Toxicol Environ Health A 71(3): 238-243.

Beelen, R., G. Hoek, et al. (2008). "Long-term exposure to traffic-related air pollution and lung cancer risk." Epidemiology 19(5): 702-710.

Boothe, V. L. and D. G. Shendell (2008). "Potential health effects associated with residential proximity to freeways and primary roads: review of scientific literature, 1999-2006." J Environ Health 70(8): 33-41, 55-36.

California Air Resources Board (2004). "Health effects of diesel exhaust particulate matter." http://www.arb.ca.gov/research/diesel/dpm_health_fs.pdf.

Chalupa, D. C., P. E. Morrow, et al. (2004). "Ultrafine particle deposition in subjects with asthma." Environ Health Perspect 112(8): 879-882.

Chepesiuk, R. (2009). "Missing the dark: health effects of light pollution." Environ Health Perspect 117(1): A20-27.

Delfino, R. J., C. Sioutas, et al. (2005). "Potential role of ultrafine particles in associations between airborne particle mass and cardiovascular health." Environ Health Perspect 113(8): 934-946.

Fanning, E. W., J. R. Froines, et al. (2009). "Particulate matter (PM) research centers (1999-2005) and the role of interdisciplinary center-based research." Environ Health Perspect 117(2): 167-174.

Garshick, E., F. Laden, et al. (2004). "Lung cancer in railroad workers exposed to diesel exhaust." Environ Health Perspect 112(15): 1539-1543.

Gauderman, W. J., E. Avol, et al. (2004). "The effect of air pollution on lung development from 10 to 18 years of age." N Engl J Med 351(11): 1057-1067.

Gauderman, W. J., E. Avol, et al. (2005). "Childhood asthma and exposure to traffic and nitrogen dioxide." Epidemiology 16(6): 737-743.

Gilliland, F. D., K. Berhane, et al. (2001). "The effects of ambient air pollution on school absenteeism due to respiratory illnesses." Epidemiology 12(1): 43-54.

Hartz, A. M., B. Bauer, et al. (2008). "Diesel exhaust particles induce oxidative stress, proinflammatory signaling, and P-glycoprotein up-regulation at the blood-brain barrier." FASEB J 22(8): 2723-2733.

Horton, D. K., Z. Berkowitz, et al. (2003). "Acute public health consequences associated with hazardous substances released during transit, 1993-2000." J Hazard Mater 98(1-3): 161-175.

Kan, H., G. Heiss, et al. (2008). "Prospective analysis of traffic exposure as a risk factor for incident coronary heart disease: the Atherosclerosis Risk in Communities (ARIC) study." Environ Health Perspect 116(11): 1463-1468.

Kozawa, K. H., S. A. Fruin, et al. (2009). "Near-road air pollution impacts of goods movement in communities adjacent to the Ports of Los Angeles and Long Beach." Atmospheric Environment 43(18): 2960-2970.

Künzli, N., M. Jerrett, et al. (2005). "Ambient air pollution and atherosclerosis in Los Angeles." Environ Health Perspect 113(2): 201-206.

Lucking, A. J., M. Lundback, et al. (2008). "Diesel exhaust inhalation increases thrombus formation in man." Eur Heart J 29(24): 3043-3051.

McConnell, R., K. Berhane, et al. (2006). "Traffic, susceptibility, and childhood asthma." Environ Health Perspect 114(5): 766-772.

Mills, N. L., H. Tornqvist, et al. (2007). "Ischemic and thrombotic effects of dilute diesel-exhaust inhalation in men with coronary heart disease." N Engl J Med 357(11): 1075-1082.

Oftedal, B., W. Nystad, et al. (2009). "Long-term traffic-related exposures and asthma onset in school children in Oslo, Norway." Environ Health Perspect 117(5): 839-844.

Pope, C. A., R. T. Burnett, et al. (2004). "Cardiovascular mortality and long-term exposure to particulate air pollution: epidemiological evidence of general pathophysiological pathways of disease." Circulation 109(1): 71-77.

Salam, M. T., T. Islam, et al. (2008). "Recent evidence for adverse effects of residential proximity to traffic sources on asthma." Curr Opin Pulm Med 14(1): 3-8.

Salam, M. T., J. Millstein, et al. (2005). "Birth outcomes and prenatal exposure to ozone, carbon monoxide, and particulate matter: results from the Children's Health Study." Environ Health Perspect 113(11): 1638-1644.

van Vliet, P., M. Knape, et al. (1997). "Motor vehicle exhaust and chronic respiratory symptoms in children living near freeways." Environ Res 74(2): 122-132.

Wilhelm, M. and B. Ritz (2005). "Local variations in CO and particulate air pollution and adverse birth outcomes in Los Angeles County, California, USA." Environ Health Perspect 113(9): 1212-1221.

Wu, J., D. Houston, et al. (2009). "Exposure of PM2.5 and EC from diesel and gasoline vehicles in communities near the Ports of Los Angeles and Long Beach, California." Atmospheric Environment 43(12): 1962-1971.

Zanobetti, A. and J. Schwartz (2001). "Are diabetics more susceptible to the health effects of airborne particles?" Am J Respir Crit Care Med 164(5): 831-833.

Zhu, Y., W. C. Hinds, et al. (2002). "Study of ultrafine particles near a major highway with heavy-duty diesel traffic." Atmospheric Environment 36: 4323-4335.

Brittany Eckersley

From: TrackingUpdates@fedex.com
Sent: Thursday, August 13, 2009 5:21 AM
To: beckersl@usc.edu
Subject: FedEx Shipment 797843753547 Delivered

This tracking update has been requested by:

Company Name:	USC
Name:	Andrea Hricko
E-mail:	beckersl@usc.edu

Our records indicate that the following shipment has been delivered:

Reference:	NIEHS Supplement Grant
Ship (P/U) date:	Aug 12, 2009
Delivery date:	Aug 13, 2009 7:16 AM
Sign for by:	P.MAYBERRY
Delivered to:	Mailroom
Service type:	FedEx First Overnight
Packaging type:	FedEx Box
Number of pieces:	1
Weight:	4.00 lb.
Special handling/Services:	Deliver Weekday
Tracking number:	797843753547

Shipper Information	Recipient Information
Andrea Hricko	Mr. Joshua Marx
USC	US Army Corp of Engineers
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Appendix B
News Stories about Diesel Cancer Risks at Railyards in California

Here are URLs for a variety of press stories concerning the emissions and cancer risks at railyards in California. The articles appear on the following pages.

Press stories dating from when the Health Risk Assessement for San Bernardino was released:
http://www.pe.com/localnews/inland/stories/PE_News_Local_S_cancer12.4376a46.html
http://www.pe.com/localnews/sanbernardino/stories/PE_News_Local_N_nrail02.22ad00d.html
http://www.insidesocal.com/sb/sbnow/2008/10/rail-yard-story.html

Here is a press story when the Commerce railyard HRAs were released:
http://articles.latimes.com/2007/may/25/local/me-smog25
http://egpnews.com/?p=7036
http://www.npr.org/templates/story/story.php?storyId=12847186

Rail yard story

By Andrew Edwards on October 2, 2008 5:16 PM | Permalink | Comments (4) | ShareThis

By Andrew Edwards
Staff Writer
SAN BERNARDINO -- Air pollution cutbacks can't come soon enough for several people who live near BNSF Railway's yard here.

Westside residents crowded the council chambers at City Hall Wednesday night to demand air quality improvements around their neighborhoods.

State regulators and BNSF employees heard about three hours from angry, frightened and impassioned words from people who demanded to know why the best possible technology could not be purchased for the San Bernardino rail yard at the earliest possible time.

Wednesday's meeting followed the release of a draft cleanup plan that sets targets for emissions reductions to be achieved in 2015 and 2020. Although BNSF executive Mark Stehly took pains to point out the rail company has tried to cut pollution since 2005, but many in the audience remained upset by having to wait for more breathable air.

"Does one of your children have to suffer from cancer so you can take awareness?," one audience member asked Stehly and the regulators who attended the Wednesday night meeting.

Cancer risks around BNSF's San Bernardino yard have come to attention after the California Air Resources Board released the draft a study called a Health Risk Assessment in April. The report, which relied on 2005 data, concluded that emissions from trains, trucks and other vehicles in and around the 168-acre railyard present elevated cancer risks to people who live in the surrounding neighborhood.

In 2005, engines coughed up 33 tons of diesel particulate matter within one mile of the San Bernardino yard. Researchers used a mathematical formula to show that in a worst-case scenario, diesel pollution increases the cancer risk by 500 chances or more per million cases for about 3,800 people who are the rail yard's closest neighbors.

The increased risk is above what 1,000 in one million cancer risk that regulators call the background level within the South Coast Air Basin of Southern California. The background level is the cancer risk that residents face simply for living in the Inland Empire or greater Los Angeles.

Harold Holmes Jr., the California Air Resources Board's engineering evaluation manager, said Wednesday that cancer risks around the San Bernardino yard are expected to be reduced by 85 percent by 2020.

At Wednesday's meeting, regulators expressed agreement with residents that the current cleanup timeline is not fast enough, but also said the current technology levels do not make it feasible for railroad companies to immediately switch from diesel engines to cleaner equipment.

"There is kind of flow of time that it takes," said Robert Fletcher, chief of the Air Resources Board's Stationary Sources Division. "It's not like we're standing still and nothing's happening."

Since 2005, BNSF has replaced 30 vehicles used to haul cargo around the yard with cleaner models, Stehly said. The company has also decided to bring in greener switching engines by 2015.

"You have our highest attention," Stehly said. "We are doing things here we don't do anywhere else."

Like the many residents who attended the meeting and voiced their concerns about cancer -- some said family members died of the disease -- Mayor Pat Morris and First Ward Councilwoman Esther Estrada called for quick action to reduce pollution.

"We all have relatives and friends who have died of cancer," Estrada said Wednesday.
Estrada said people living near the railyard to organize and press for improvements. She also said it more be necessary for BNSF to relocate its San Bernardino operations.

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4 Comments

Watchin', Waitin', Wonderin'..... said:

What a wonderful idea Esther! Have BNSF move more of their operations....and where to? Just like when they wanted to connect to the airport but Valles didn't want to disturb all the beautiful, historic homes on 5th so we lost that and the jobs that went with it? YEP.....the jobs keep leaving, the homeless shelters and parolee homes keep moving in, and the decent families that can afford to keep moving out.

I can't wait to see if she runs for her seat again.....

October 2, 2008 5:26 PM

cj said:

BNSF is the largest private employer in San Bernardino.

Esther believes: She also said it more be necessary for BNSF to relocate its San Bernardino operations.

PE.com THE PRESS-ENTERPRISE

At San Bernardino rail yard with worst cancer risk in state, plan on cutting emissions to take months

08:24 AM PDT on Thursday, June 12, 2008

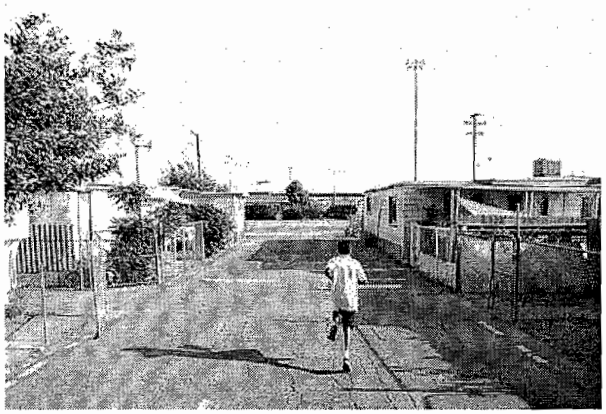
By DAVID DANELSKI and DAVID OLSON
The Press-Enterprise

Residents facing the worst known cancer risk from rail yard pollution in California will have to wait as long as three months before they learn how the state plans to cut emissions from the bustling train and cargo hub in San Bernardino.

The cancer risk linked to diesel emissions from the BNSF Railway yard in southwest San Bernardino is at least 2.5 times higher than at any of 15 other rail yards analyzed by the California Air Resources Board.

Air board officials are meeting regularly with railroad representatives to find solutions for all the rail yards, said Harold Holmes, manager of the air board's engineering evaluation section. Plans to reduce the risk to residents in San Bernardino are expected to be completed by the end of the summer, he said.

Story continues below



Stan Lim / The Press-Enterprise
At Sunset Mobile Home Park, some residents are uneasy about the health effects of living across a street from a rail yard. State officials said Wednesday that the cancer risk posed by the yard is higher than reported previously, before they realized the park was there.

The work involves a complicated analysis of pollution from locomotives, trucks, cranes and other rail-yard equipment and how it can be reduced, Holmes said. The yard was expanded in the late 1990s to become a

hub where cargo is transferred between trains and trucks; in the 2005 study year, the yard handled 550,000 cargo containers.

The response is too slow for Teresa Lopez, who lives across the street from the yard.

"They are just going through the motions," Lopez said. "Why can't they push to get something done sooner?"

San Bernardino Mayor Pat Morris said he, too, wanted swifter action but views the state air board as an ally. He said an agency official told him Wednesday that the San Bernardino yard is a priority.

"I am assured that we are at the top of the list," Morris said.

The city will work to reduce pollution by crafting rules to cut truck parking and idling on city streets near the yard, Morris said. The city also will consider truck routes to keep the rigs farther from homes, he said.

Risk Revised Up

Air board officials recently recalculated the cancer risk from the San Bernardino yard after realizing they had overlooked Sunset Mobile Home Park. The neighborhood is across a street from a cargo checkpoint where big rigs line up, Holmes said.

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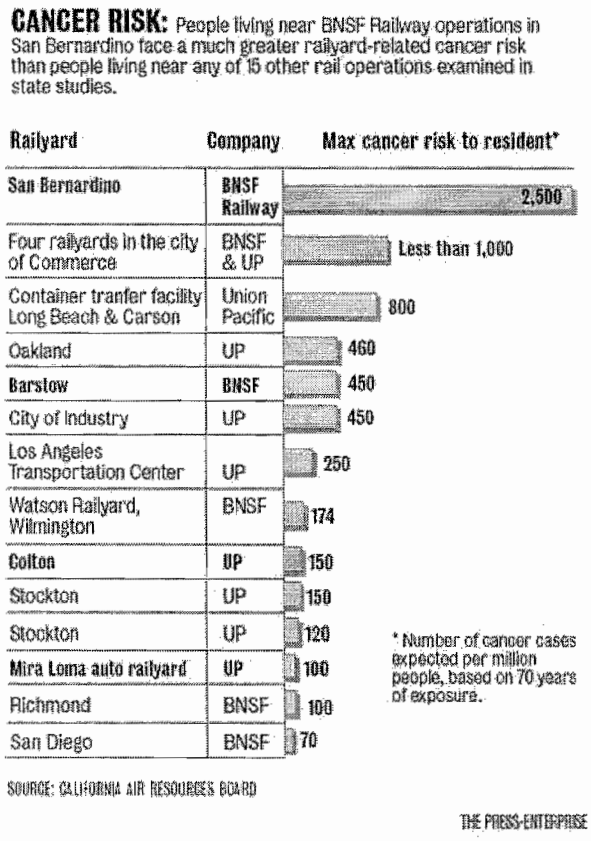


Residents of the 13-unit park face the highest cancer risk -- 2,500 cases of cancer per million people -- among people exposed to diesel exhaust drifting from locomotives, trucks and other equipment at the San Bernardino rail yard, according to a revised report released Wednesday. A version of the report released in May put the highest risk at 2,030 cases per million.

Cancer risk calculations are based on a lifetime of exposure. Southern California's average risk from air pollution is about 1,000 cancer cases per million people; the rail yard risk is on top of that.

Lena Kent, a BNSF spokeswoman, said the cancer risk has declined since 2005, when the pollution data that

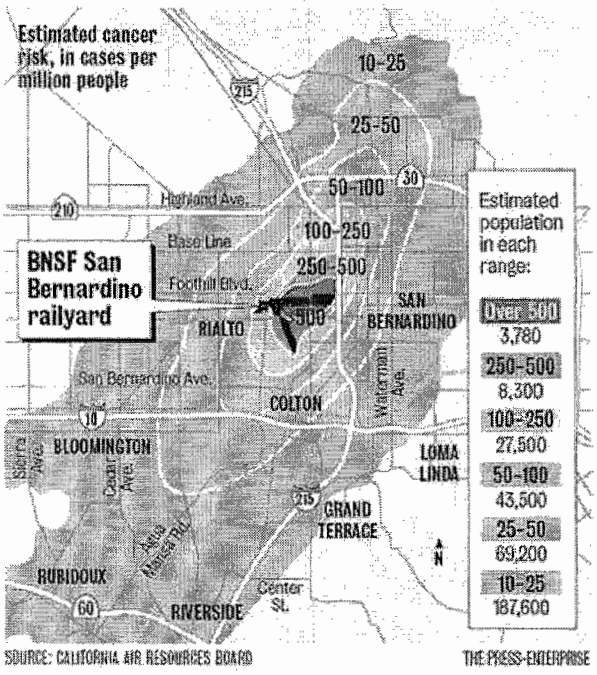
the state's analysis relied on was gathered. Railroads have since taken steps to reduce emissions, she said. Among those steps: cleaner locomotives and locomotive fuels, and new controls to reduced idling. BNSF requires truckers working in the San Bernardino yard to stop their engines when their trucks are not moving.

New pollution measurements have not been taken, but Holmes agreed that the air quality near the yard should have improved. A slowdown in cargo shipping probably has helped too, he said.

Holmes said that by 2013, all trucks serving rail yards and ports will have to have particle traps on their exhaust pipes, which he said will reduce diesel pollution by 90 percent.

Story continues below

DANGER ZONE: A state study found that people living downwind of the BNSF railyard in San Bernardino face an increased cancer risk of as many as 2,500 cases per million people. The estimated regional cancer risk from all air pollution is 1,000 cases per million people.



Uneasy Neighbors

Several residents of the Sunset park said they have suffered more health problems since they moved there.

Maria Martínez, 47, said in Spanish that her two daughters' asthma has gotten worse since her family moved four years ago from Los Angeles into a mobile home directly across the street from the rail yard. One daughter is 10 years old; the other is 22.

Martínez said she has had breathing problems since the family moved there but can't afford to see a doctor. She also gets a bloody nose several times a year, she said. The entire family -- which also includes Martínez's husband and 15-year-old son -- periodically suffers from irritated eyes, she said.

Martínez said it is disconcerting to see the pollution illuminated at night.

"When you go out at night and see it in the light, you can see a cloud of gray and black smoke," she said.

Martínez's purple mobile home has a "For Sale" sign on it.

The family wants to move because of the health problems, Martínez said. But she's convinced that one reason they haven't been able to sell is that when potential purchasers see the trucks and trains across the street, they have second thoughts.

"If we can sell it, good, but if we can't sell it, we'll have to put up with it," she said.

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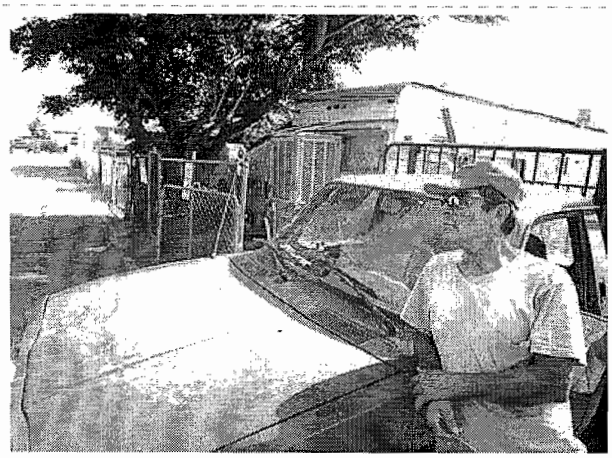

Residents said they continue to live at Sunset primarily because it's cheap: Spaces generally rent from $250 to $300 a month, said park manager Mimi Hernández.

Hernández, who attended a May 8 meeting at which state officials discussed the rail yard pollution, was upset that the air board had missed the mobile-home park in its survey.

Down the street from Martínez, Marta Morales said that several weeks ago she spent three weeks with coughing fits. It turned out to be a throat infection. Morales believes rail-yard pollution is to blame.

Penicillin helped alleviate the problem, but she still sometimes has a bad cough, she said. Morales, 30, said in Spanish that she did not have the problem before she and her husband moved from Ontario less than a year ago.

Husband Miguel Morales, 30, called on the state or railroad to start using low-polluting equipment or take some sort of other action to reduce the risk to residents.

"If they know they are polluting and they're hurting people, they should do something," he said.

If the pollution is serious enough, the railroad should pay to relocate residents, Miguel Morales said.

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BNSF, state pollution officials hear residents concerns over rail yard

10:00 PM PDT on Wednesday, October 1, 2008

By DAVID DANELSKI
The Press-Enterprise

SAN BERNARDINO - Railroad representatives and state air pollution officials vowed Wednesday night to strengthen a diesel-pollution cleanup plan for California's most problematic rail yard, but the assurances did little to mollify a crowd of about 100 people who sometimes shouted in anger.

The California Air Resources Board held the meeting at City Hall to hear suggestions on how to cut pollution from the BNSF Railway yard, which a study determined presents the highest known cancer risk to residents of any rail facility in the state.

Harold Holmes, an air board manager overseeing rail-yard cleanup, said the plan is still evolving.

The plan calls for using low-pollution locomotives to assemble cars into trains; spending $7 million to build new truck check-in stations to reduce idling near homes; and possibly relocating a truck driveway to put it farther from houses. In addition, state and federal regulations requiring cleaner trucks and locomotives will kick in over the next 10 years.

Some residents were skeptical.

Simon Washburn, who lives east of the rail yard in southwestern San Bernardino, held up an article from the BNSF Web site describing state-of-the-art technology to be used at a rail yard in Long Beach.

"Can't we bring that technology here first, before you start expanding in other places?" he asked.

Another resident, Carolyn Zazueta, who lives next to the rail yard, said the pollution has made her ill, aggravating allergies and causing skin rashes and other problems.

"The technology is here now, and you're not doing it," she said.

The audience broke into applause in response.

Mark Stehly, a BNSF environmental and research development official, said it's not a simple matter to transfer the technology to San Bernardino.

The company will do everything that's feasible to cut the diesel emissions in San Bernardino, he said.

Holmes said the state is undertaking a two-month study to determine the cost and practicality of various measures to clean up the air at the yard.

A state study released earlier this year estimated the cancer risk attributed to the yard at 2,500 cases per million people. That is 2.5 times worse than the state's second-worst rail yard, in Commerce.

It is 25 times and 17 times worse, respectively, than the Union Pacific yards in Mira Loma and Colton,

according to state reports.

The yard handles as many as 550,000 shipping containers in a year, transferring them from trucks to trains or vice versa, and funneling them to other parts of the country.

Reach David Danelski at 951-368-9471 or ddanelski@PE.com

Breath of Fresh Air in Commerce? Maybe

Recent State board's decision to include provisions from East Yard community group is cited as a victory for Commerce stakeholders who struggle to live in harmony with the locomotive industry.

By Elizabeth Hsing-Huei Chou, EGP Staff Writer

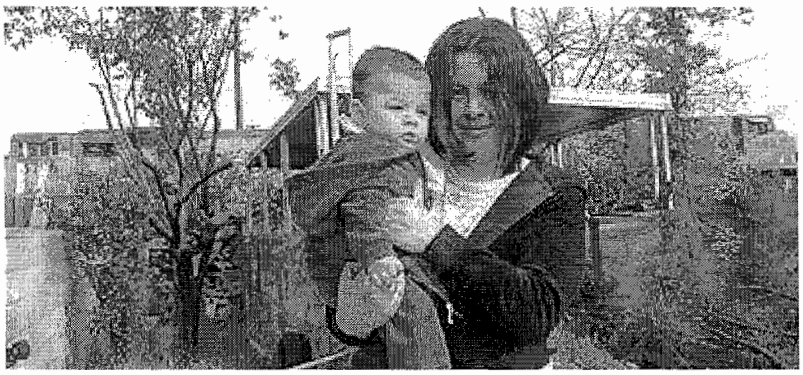
To her children, Madeline Clarke was the "crazy mom" who watched the trains parked behind her Commerce home and produced piles of notes on how long each would stay there.

Trains sidled up behind her home at all hours of the day and night, all the while shaking the foundations of the houses up and down the street. Then the trains, still running their engines and continuing to rumble and send out plumes of smoke, would wait.

Clarke said the trains would idle on the track behind her home for up to 24 hours. "I'd be cooking in the kitchen … and a train would come and I'd notice it. I'd hear it and I'd look. I see the number and write it down. And I write the time down. And then I started noticing that they were there hours and hours and hours," she says.

This was no ordinary, harmless waiting. When Clarke says her home is next to the Union Pacific railyard in Commerce, she means the tracks are right up against her back wall. Smoke from the trains would leave a film of soot that covered her windows.

But the closeness of the trains also meant she could shoot stern glances at railyard employees just as easily as she could talk to her next-door neighbors over the side wall. "I'd go out there and stand there and shame [the railyard workers] to get out of there, you know. And the guys will say 'I'll be out of here as soon as they give me permission…' They all know better than to park there for that long," Clarke says.



Tiffany Martinez, 24, holds her eight-month old son Dylan, who suffers from asthma. She also has a four-year old son who suffers from bronchitis. Ever since Commerce became a city in the 1960s, her family has lived in the same house next to the Union Pacific railyard. She says the sights and sounds of the railyards have been so commonplace that she hardly notices them until friends spending the night complain. Ever since her children were born with illnesses that she attributes to the polluted air, she has considered moving away. But she is

reluctant to act. "This is the only place we know and Commerce is a good city to live in," she says. (EGP Photo by John Ung)

Clarke's children no longer call her crazy. A number of health studies have now confirmed what she always felt: train emissions are unhealthy. Studies now show that exposure to the fine powdery substance known as diesel soot, blown into the air by locomotives and other diesel-powered vehicles, can lead to asthma and other respiratory illnesses.

People who live in the Bandini and Ayers-Leonis neighborhoods, near the railyards in Commerce, are 40 to 70 percent more likely to develop cancer than people living elsewhere in Los Angeles, according to a 2007 study by the state air resources board. In other words, the closer you live to the rail yard, the higher the risk, according to Karen Caesar, an information officer with the California Air Resource Board, (CARB), referencing the Commerce (Four Rail Yards) report.

These alarming statistics and health studies are well known in Commerce. "This is considered cancer city," says Bandini area resident Charlie Miranda, 41, not only because of the railyards, but also because of the I-710 and I-5 freeways that criss-cross their neighborhoods and the high volume of diesel trucks that run through their industry-heavy city.

The Bandini neighorhood where Clarke and Miranda live is adjacent to one of the biggest railyards in the state. In total, the four Commerce railyards encompass 530 acres in the city.

New health studies, public outrage over a 2003 train derailment, and a voluntary agreement between the railroad companies and the state Air Resource Board are thought to have pushed the railroad companies into updating locomotive technology and purchasing environmentally-friendly trains.

The railroad companies, however, say these changes were already in the works, and for years they've been steadily addressing the health effects of their activity and conscientiously following through on plans to reduce emissions. In 1998 they started reducing the emission of NOx, a poisonous chemical produced through the combustion of diesel engines. They then moved on to tackle emissions of diesel particulate matter in 2005, under a voluntary agreement with the state. And in early 2008 they began talking to the state about exploring further ways of "greening" their activity.

But Commerce residents and activists say they were not included as equal players in the process. In 2005, BNSF Railway Co. and Union Pacific Railroad Co. entered into a "Memorandum of Understanding" with CARB. It was drawn up without the input of the community, activists said.

When it was completed, the plan was sprung on them in a news release from the state. California Air Resources Board officials say this was because in 2005 it was not policy to invite the public into these discussions. What seemed like policy to the state seemed to the public like "secret meetings."

The agreement requires the railyards to limit train idling, ensure their trains meet smoke inspection standards, use cleaner diesel fuel, and conduct health risk assessments. The changes have since reduced railyard diesel PM emissions by 20 percent, according to Caeser.

As part of the mitigation plan, the state agency began taking a closer look at health risks posed by railyard pollution. CARB's health risk assessments on 18 major railyards in California, mostly completed in 2007 and 2008, turned up results that startled even agency officials, according to Angelo Logan, executive director of East Yard Community for Environmental Justice.

"I don't think [officials at CARB] expected it to be that dramatic," he says.

The assessment revealed that the four BNSF railyards in Commerce emitted 40 tons of toxic air contaminants a year in 2005, while the Union Pacific railyard in Commerce emitted 11 tons. Even though the amount of emissions in Commerce is not the highest in the region, it has a high enough concentration of residents living in close proximity to the railyards to cause alarm. The CARB's assessment indicates that statewide, railyard pollution puts 2.8 million residents in California at greater risk of cancer, due to their large foot print. But according to Caeser, "Risks drop off significantly the further you get from the yard."

Community groups say the mitigation plan is useless because it's voluntary and doesn't take into account concerns raised by the community.

"It's not that the railyards have not been following regulations, but that there hasn't been any regulations that are adequate for protecting the public's health, especially if you have residents that live close to the railyards," Logan says.

Dissatisfied with the 2005 agreement, southern California environmental groups worked with their local, regional air quality agency to introduce stronger regulations. When the railroad companies challenged the adoption of these regulations in court, the South Coast Air Quality Management District and the environmental groups were told by the judge that only the state, or CARB, has the authority to regulate the railroads. Railroads are federal entities and regulating them would interfere with interstate commerce, the judge said.

Clarke, who by that time had joined East Yard, had given testimony for the AQMD trial. During an East Yard meeting held after the judge's decision, Clarke proposed an idea.

"I said we should sue them. Let's sue our own Air Resources Board because they're not defending us. They're not looking out for our good. They're looking out for the railroad," she told EGP.

East Yard did just that. They took CARB and the two main railroads in California, Union Pacific and BNSF, to court in December 2007 for not doing enough to reduce emissions. Clarke, who was one of the plaintiffs in the lawsuit, reasoned that the state had not placed taxpayers on equal footing with the railroad companies.

"They represent us. They don't represent the railroads. They are our officials and they have to do for us," Clarke says.

A federal charter always seemed to give the railroad companies an upper hand in most negotiations. "They come to the table, but… as soon as they don't like it anymore, they just walk away, pretty much hiding behind the power of their federal charter. It's that whole federal issue, so that's a tough thing, to keep them on the table," says Jason Stinnet, Clarke's son who also happens to be a public information officer for the city of Commerce.

The lawsuit was just one way East Yard tried to bring the state and the railyards to the table again. They teamed up with several other environmental groups in Oakland, Wilmington, Riverside, and San Bernardino and filed a petition in April 2008 requesting that CARB adopt stronger regulation on railyard emissions. Their petition was denied three months later. CARB reasoned that they were uncertain about whether they had the authority to regulate the railroads, which have traditionally been difficult to regulate because they are under federal jurisdiction. CARB also expressed uncertainty about how

effective the measures proposed in the petition would be in reducing emissions.

The environmental groups filed an appeal in September 2008 to have CARB reconsider. This time CARB began studying the technical feasibility of the 37 different measures for reducing railyard emissions. They completed the study in December 2008.

On January 20, 2009, CARB's executive officer James Goldstene granted the environmental groups most of the terms of their petition. A day later, East Yard's lawsuit against CARB and the railroad companies was dismissed without prejudice.

East Yard's attorney Gideon Kracov credits the final result to a combination of the environmental groups' lobbying, petitioning, and legal pressure. The environmental groups are now ready to work with the state on strengthening regulation. "We agreed to dismiss the case in exchange for these positive developments," Kracov says.

"As the case got moving we were able to settle… we accomplished our mission… we would rather work collaboratively with the air resources board on this new project," he said.

Kirk Marckwald, who represents the Railyard association, disagrees with East Yard's view on the impact of their petition and lawsuit. He says the railroad companies were already working on a new plan as part of the requirements of their voluntary agreement with the state. "I think the genesis of the plan is the air resources oversight trying to find ways to reduce emissions. I think it's independent of any petition or any lawsuit," he says.

"What [CARB] granted was what we are going to do," Marckwald maintains. And the decision did not decide anything about how the ideas from the technical document would be implemented. Marckwald says the state will first analyze which agencies have the authority to regulate locomotives and what kind of funding sources are available.

At the moment, state board representatives say they don't consider themselves to have authority over railroad companies.

"The railroads have been partners in this process, and while they may not embrace every suggestion that is offered, they have shown themselves to be committed to doing what is economically and technologically feasible. We do not have the authority to force them to comply so we appreciate that they have volunteered their efforts on this issue and have already devoted extensive resources in this area," says CARB's Ceaser,

Still, East Yard has hailed the state board's decision to grant their petition as unprecedented. They say CARB has agreed to look into introducing a set of regulations meant to cut railyard emissions by up to 45 percent in the next seven years. The agency has asked its staff to put together a proposal that will be presented at a board meeting in June.

This plan would be the most comprehensive air quality plan to address railyard pollution in the state, according to Logan. Ten out of the eleven measures suggested by the environmental groups will be included with the proposal. They include strategies for enforcing the railyards' compliance with existing state and federal requirements and will introduce new requirements for upgrading train technology and equipment to meet more rigorous standards.

Logan also says that newer, more sympathetic CARB leadership and the revelation of the health risks

were instrumental in producing the outcome. He says there may still be challenges from the railyards as well as other interests invested in the goods movements industry, but for now they are looking forward to collaborating with both the state and the railroads on the new plan.

"We will just be looking at and illustrating the facts and science, showing the [railroad companies] that these strategies are feasible and also doable, and there will be some real advantages in terms of improving public health," he says.

The railroad companies are in agreement. "I think the railroads welcome any stakeholder who wants to be involved in a dialogue of what is technically feasible, cost effective and can happen for locomotives in and around railyards," Marckwald says.

Despite recent developments, Clarke wavers between staying optimistic and keeping her expectations low. Partly, she thinks the community has not taken a strong enough stand for themselves. "I feel we're not radical enough. We're too… how would you say, passive. … We need lawmakers to change this thing" she says.

The voice of the community has been exactly what's missing from the whole process, she says.

The handling of the 2005 agreement is symbolic of this. "We objected to the MOU because we said it didn't include the community. They didn't come to us. They just made the proposal and they were going to shove it down our throats and we protested it," she says.

The community needs to stay on the railroad companies' and the state's case. "As long as we keep bothering, … picking at them, then eventually, maybe one day they'll pay attention," she says.

The fences behind the homes in Commerce railyard neighborhoods were replaced by a brick sound wall in recent years, which Clarke says is well-intentioned but has had the negative affect of blocking railyard activity from the eyes of the community.

She remembers when the brick walls were just chain-linked fences. "With all the idling that they were doing, I started getting up on the ladder [to see] she says. "Before we didn't have that brick wall there, we had just a regular iron chain link fence back there, we could see what was going on. Then came that big brick wall there and we didn't pay attention," she says.

But if nothing else, the railroad companies and the air resources board know she's watching them.

"They know me, they know me," she says.

Related: 2003 Commerce Train Derailment Fueled Community Action Against Railroads

< Railways' Toxic Emissions Tied to Higher Cancer Risk

Heard on All Things Considered

August 16, 2007 - ROBERT SIEGEL, host:

From NPR News, this is ALL THINGS CONSIDERED. I'm Robert Siegel.

Imagine living next to a busy rail yard with trains and trucks in constant motion at all hours of the day and night.

(Soundbite of passing vehicles)

SIEGEL: Not only is it noisy but the soot isn't good for you. Scientists have linked high levels of diesel exhaust to serious health problems. And now California officials are measuring those health costs in communities near active rail yards.

From member station KQED, Sarah Varney has this report.

SARAH VARNEY: A locomotive pulls a long line of railcars behind the tidy row of houses in the city of Commerce, a working class community a few miles southeast of downtown Los Angeles. Angelo Logan (ph) grew up here.

Mr. ANGELO LOGAN (Resident, Commerce, California): I remember when we were kids we used to come back here on that street, and we'd, you know, ride our bikes and there's a lot of small, little factories and little shops here. And now, it's all become occupied by the railroad and its moving operations.

VARNEY: When this town incorporated in 1960, residents, proud of their ties to manufacturing and eager to court business, chose the name Commerce. Now the city is a booming metropolis of trade that runs on diesel fuel.

Twenty-four hours a day, trucks haul cargo containers from the ports of Los Angeles, packed with plasma televisions and plastic toys to the sprawling rail yards here. Towering cranes move the containers onto trains that fan out across the country.

Sandwiched between the freight yards are the city's old neighborhoods. Manicured front lawns are littered with Tunka Trucks and plastic jungle gyms. A layer of black soot mutes the cheery yellow and blue stucco homes that press into rail yard fences. Commerce is a city saturated in diesel exhaust.

Mayor ROBERT FIERRO (Commerce, California): We all live with them because we've been living with them for so many years, so we got used to them.

VARNEY: Robert Fierro is the mayor of Commerce and a schoolteacher. He, Logan, and others in the community are fuming over a state health study released earlier this year. California EPA regulators went into Commerce and did an assessment of health risk in the area. They found the air quality is so bad that the cancer risk for families living closest to the rail yards is 180 times higher than what's considered acceptable. And the soot that spreads for miles around these yards increases the likelihood of cancer for 1.2 million people.

In the past, air regulators have focused on reducing diesel emissions at the ports, which are the largest polluters. But now the state's ever expanding rail yards are coming under greater scrutiny.

Mr. HAROLD HOLMES (Manager, Engineering Evaluation Section, California Air Resources Board): I don't think even one premature death is acceptable from the Air Resources Board's perspective.

VARNEY: Harold Holmes works for Cal EPA's Air Resources Board, or CARB.

Mr. HOLMES: Our goal is always to reduce emissions as much as we possibly can so that we can protect public health.

VARNEY: CARB entered into a voluntary agreement two years ago with two major railroads that operate in the city of Commerce and elsewhere in the state. As interstate Commerce, railroads are exempt from many state and local pollution laws. The railroads are now burning cleaner fuel and have installed devices to control idling.

But now that CARB can point to a clear increase cancer risk near the rail yards, Holmes says the board intends to ask railroads to do more by replacing dirty diesel engines with expensive new ones, and it's hoping to use state funds to help truckers install tailpipe filters.

Kirk Markwald represents the Association of American Railroads. He says the railroads are willing partners.

Mr. KIRK MARKWALD (Representative, Association of American Railroads): My belief is looking at what the railroads have done in the past with respect to their commitment to fair share emission reductions, that they will continue to do their fair share in reducing it around the facility.

VARNEY: But there's a lot of distrust in Commerce about whether the railroads will follow through. Relations haven't quite been the same since 2003 when a rail company diverted dozens of runaway freight cars headed for Los Angeles to the city of Commerce. The cars crashed into blue-collar homes, some with residents still inside. There were only minor injuries, but bulldozers had to clean up the wreckage and mountains of debris.

Kurt Weiss works for the local agency charged with cleaning up L.A.'s notoriously polluted air.

Mr. KURT WEISS (Attorney, Air Quality Agency): We share the community position that the railroads have not been good corporate citizens. They haven't been good neighbors. And I'd be very surprised if there are meaningful risk reduction measures that are undertaken.

VARNEY: Commerce Mayor Robert Fierro says he doesn't want to get rid of the rail yards but he says the derailment and the recent cancer study means local leaders should be given a louder voice in regulating polluters in their own backyard.

Mayor FIERRO: Now that we feel like it's more evident that more people are suffering, I think that's - well, kind of, woke everybody up. And this is how we are approaching it and are now more a little bit more vicious, because it's just we're being too nice.

VARNEY: The recent cancer study could give more ammunition to the citizens of Commerce as they continue to push for a cleanup of the freight transport industry.

For NPR News, I'm Sarah Varney.

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